

Appendix D

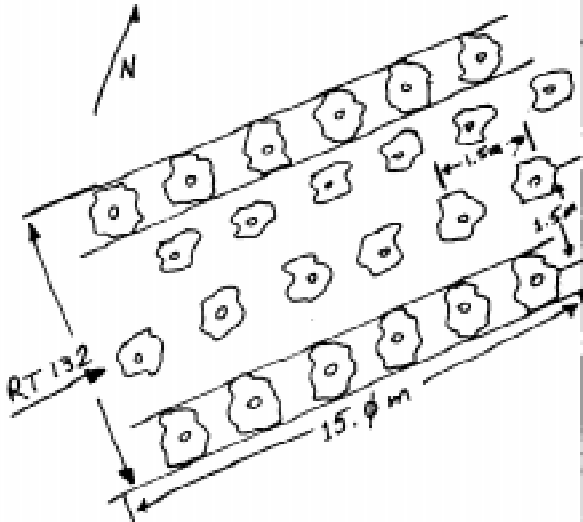
Engineer Recon

A general engineer recon gathers engineer information of a broad nature within an AO. It considers construction material, resources, and terrain features having engineer applications.

A general engineer recon may be conducted in conjunction with other recons. The Engineer Reconnaissance Report (see Figures D-1 and D-2, pages D-2 through D-6) will help ensure that all important information is captured.

The Engineer Reconnaissance Report is used to report items that are not adequately covered by other report forms previously discussed in this manual, but one of significance to engineer activities. The following information is included in the report:

- **Heading.** Self-explanatory.
- **Key.** The key references the item of the report and its corresponding location on the recon overlay. The object's serial number (or critical point number) is entered in this column.
- **Object.** Shown by a conventional symbol (see Figure D-3, pages D-7 and D-8) or a brief written description.
- **Work Estimate.** If a work estimate is included as part of the report, enter yes; if not, enter no.
- **Additional Remarks.** In this column, report the object's location by grid coordinates followed by remarks, calculations, and sketches. Make this information as detailed as possible to alleviate the necessity for an additional recon.
- **Authentication Block.** This is for the company commander's signature block and signature.
- **Work Estimate.** The work estimate is on the back of the DA Form 1711-R. Each work estimate is keyed by a serial or critical point number to the appropriate object on the reverse side of the form. Only those columns that are appropriate need be completed. Draw additional sketches when necessary (see Figure D-2).

ENGINEER RECONNAISSANCE REPORT <small>(For use of the Engineer to report to the appropriate agency, if needed)</small>				PAGE 1 OF 4 PAGES	
TO Co, 21 ST ENGR BN				FROM CoA 21 ST ENGR BN	
FILE NO	PARTY LEADER (Name, Grade, Unit) THOMAS P. TAYLOR 2LT CoA 21 ST ENGR BN			PLACE-HOUR-DATE UT 586703 112000 MAR 80	
REPORT NO 1					
MAPS QUANTICO, VIRGINIA SHEET 5561 II SCALE 1:50,000					
DELIVER TO (Organization, Place, Hour and Date) S2, 21 ST ENGR BN UT 556461 120100 MAR 80					
KEY	OBJECT	TIME OBSERVED	WORK ESTIMATE	ADDITIONAL REMARKS AND SKETCH	
1	X	0900	YES	UT 058684 - LOG POST OBSTACLE BLOCKING RT 132 SKETCH  <p>(24) LOGS @ 0.5m DIAMETER, C-C 1.5m. ON ALL SIDES, 1.5m TO 2.5m ABOVE GROUND</p>	
Engineer Work Estimate On Other Side					
TYPED NAME, GRADE, ORGANIZATION CHARLES ROSCOE, CPT Cdr, Co A, 21st Engr Bn				SIGNATURE <i>Charles Roscoe</i>	

DA Form 1711-R Edition of 1 Jun 61 is obsolete

Figure D-1. Sample Engineer Reconnaissance Report (front)

ENGINEER RECONNAISSANCE REPORT		PAGE 2 OF 4 PAGES		
TO CO 21 ST ENGR BN		FROM CO: CoA 21 ST ENGR BN		
FILE NO	PARTY LEADER (Name, Grade, Unit)	PLACE-HOUR-DATE		
REPORT NO 1	THOMAS P. TAYLOR 2LT CoA 21 ST ENGR BN	UT 586 708 112000 HARP0		
MAPS QUANTICO, VIRGINIA SHEET 5561 III		SCALE 1:50,000		
DELIVER TO (Organization, Place, Hour and Date) S2, 21 ST ENGR BN UT 556 461 120100 HARP0				
KEY	OBJECT	TIME OBSERVED	WORK ESTIMATE	ADDITIONAL REMARKS AND SKETCH
1	X	0900	YES	CONT. OBSTACLE NOT DEFENDED BYPASS - DIFFICULT (fwd) DUE TO SWAMPY TERRAIN
2	⌵	0920	NO	UT 509676 - GRAVEL PIT IN OPERATION QUANTITY - APROX. 6000 YD ³ STOCK PILE RANGING FROM 1in. to 3in. in DIAMETER TYPE - CRUSHED GRANITE COMMUNICATIONS - GOOD ACCESS ROADS WITH AMPLE SPACE FOR TURN AROUND AND LOADING.
3	W	0940	NO	UT 589774 - ABANDONED ENEMY EQPT. QUANTITY & TYPE - (2) "ZIPLO" MODEL 200 CRAWLER CRANES. (OPERATIONAL) CHECKED FOR BOOBY TRAPS - NONE
Engineer Work Estimate On Other Side				
TYPED NAME, GRADE, ORGANIZATION CHARLES ROSCOE, CPT Cdr, Co A, 21st Engr Bn			SIGNATURE Charles Roscoe	

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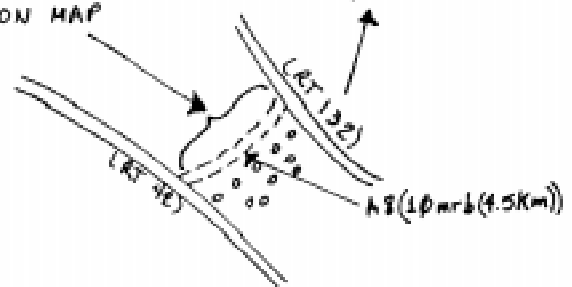


Figure D-1. Sample Engineer Reconnaissance Report (front) (continued)

ENGINEER RECONNAISSANCE REPORT <small>Replaces all the forms for FM 5-170, 1 Jun 61, and 1 Jun 68, 1 Jun 69.</small>		PAGE <u>3</u> OF <u>4</u> PAGES		
TO <u>CO, 21st ENGR BN</u>		FROM <u>CO, CoA 21st ENGR BN</u>		
FILE NO	PARTY LEADER (Name, Grade, Unit) <u>THOMAS G. TAYLOR 2LT</u>		PLACE-HOUR-DATE <u>UT 556700</u>	
REPORT NO <u>1</u>	CoA 21 st ENGR BN		<u>112000 MAR 80</u>	
MAPS <u>QUANTICO, VIRGINIA</u>		SHEET <u>5561 JII</u>	SCALE <u>1:50,000</u>	
DELIVER TO (Organization, Place, Hour and Date) <u>S2, 21st ENGR BN UT 556401 120100 MAR 80</u>				
KEY	OBJECT	TIME OB- SERVED	WORK ESTI- MATE	ADDITIONAL REMARKS AND SKETCH
	BIV AREA	1035	NO	<p>UT 512692 - POSSIBLE BIVOUAC AREA</p> <p>SIZE - 700 m x 900 m</p> <p>COMMUNICATIONS - GOOD ACCESS ROAD W/GOOD DRAINAGE & HARD SURFACE</p> <p>SITE CONDITIONS - GOOD DRAINAGE WITH FIRM SOIL, GOOD CR, GOOD OBSERVATION & F/F</p>
		1150	NO	<p>UT 558630 - POSSIBLE WATER POINT</p> <p>QUANTITY - $Q = AV6.9$</p> <p>$A = 13.5 \text{ FT}^2$ $V = 35 \text{ FPM}$</p> <p>$Q = (13.5)(35)(6.4) = 3,012 \text{ GPM}$</p> <p>QUALITY - CLOUDY, NO ODOR, NO OBSER- VED SOURCE OF POLLUTION, SPL WAS TAKEN FOR TESTS.</p> <p>COMMUNICATIONS - GOOD ACCESS RDS, FROM MSR, GOOD TURN AROUNDS & PARKING ON SITE.</p> <p>SITE CONDITIONS - GOOD, SLOPE OF BANKS 5%, BIVOUAC AREA ON SITE FOR W.P. TEAM, BRIDGE POSSIBLE ARTILLERY TARGET</p>
Engineer Work Estimate On Other Side				
TYPED NAME, GRADE, ORGANIZATION CHARLES ROSCOE, CPT Cdr, Co A, 21st Engr Bn			SIGNATURE 	

DA Form 1711-R, May 88

Edition of 1 Jun 81 is obsolete

Figure D-1. Sample Engineer Reconnaissance Report (front) (continued)

ENGINEER RECONNAISSANCE REPORT <small>For use of the Recon. and Engr. Bns. in the preparation of maps.</small>			PAGE <u>4</u> OF <u>4</u> PAGES	
TO <u>CD, 21st ENGR BN</u>			FROM <u>CD, COA 21st ENGR BN</u>	
FILE NO	PARTY LEADER (Name, Grade, Unit) <u>THOMAS P. TAYLOR, 2LT</u> <u>COA 21st ENGR BN</u>		PLACE-HOUR-DATE <u>UT 586 908</u> <u>112000 MAR 80</u>	
REPORT NO <u>1</u>				
MAPS <u>QUANTICO, VIRGINIA</u>			SHEETS <u>5562 III</u> SCALE <u>1:50,000</u>	
DELIVER TO (Organization, Place, Hour and Date) <u>52, 21st ENGR BN UT 556 961 12 0100 MAR 80</u>				
KEY	OBJECT	TIME OR-SERVED	WORK ESTI-MATE	ADDITIONAL REMARKS AND SKETCH
	<u>MAP ERROR</u>	<u>1200</u>	<u>NO</u>	<u>UT 557 963 TO 558 003</u> <u>ROAD NOT SHOWN</u> 
		<u>1230</u>	<u>NO</u>	<u>UT 761 932 EXISTING WATER PURIFICATION PLANT SUPPLYING WATER TO THE CITY OF YUCK.</u> <u>OUTPUT 50,000 GAL PER DAY.</u>
Engineer Work Estimate On Other Side				
TYPED NAME, GRADE, ORGANIZATION <u>CHARLES ROSCOE, CPT</u> <u>Cdr, Co A, 21st Engr Bn</u>			SIGNATURE <u>Charles Roscoe</u>	

DA Form 1711-RL, May 80

Edition of 1 Jun 61 is obsolete

Figure D-1. Sample Engineer Reconnaissance Report (front) (continued)


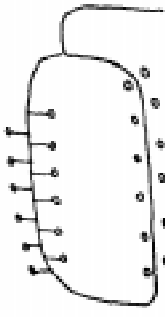
ENGINEER WORK ESTIMATE									
LOCATION KEY	DESCRIPTION OF WORK	UNIT RE-QUIRED	NO. HOURS	EQUIPMENT		HRS	MATERIALS		QUANTITY
				TYPE	NO.		TYPE	UNIT	
<div> $P = \frac{0.4 \cdot (14.2)^{1.4}}{40} = 9.3'$ $\therefore 1 \phi / \text{POST}$ $24 \phi \text{ \# TOTAL}$</div>	<div>REMOVE LOG POST FROM ROUTE 132 BY DEMO</div> <div></div>	1	2	DEMO SET #1	1	1	TNT	#	240
		SQD		D-7 CAT	1	2	D-CORD	FT	140
							NOV ELECT CAPS	EA	25
							TIME FUSE	FT	4
							M-2 FUSE LIGHTER	EA	1
Reconnaissance Report on Other Side									

Figure D-2. Sample Engineer Reconnaissance Report (back)















Sawmill		Iron and steel stock	
Lumber yard		Wire stock	
Stone		Paint	
Aggregate (including gravel and slag)		Glass stock	
Sand		Gypsum and lime products	
Cement concrete products		Asphalt and bituminous stock	
Stocks of bricks and other clay products		Stocks of roof covering	

Figure D-3. Engineer resource symbols



















Building hardware		Mobile, heavy-construction equipment	
Industrial gases		Forestry equipment	
Cordage, nets, yarns		Quarrying equipment	
Civil-engineering firms		Handling and transportation equipment storage	
Building contractors		Powered hand tools	
Factories		Water-purification equipment (civilian)	
Factory symbol plus plant product		Electrical supply equipment	
Steel-rolling mills and foundries		Established military water point	
Engineering workshops		Possible military water point	

Figure D-3. Engineer resource symbols (continued)